



Survey Report

JUN 01 2018

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Service Company: Wellbenders Directional Services

Location: Eddy County, New Mexico

Well: Morris Boyd 23-2H

Rig: Silver Oak #1

API or UWI: 30-015-44670

Job Number: WTXDG 2018-1035

State: New Mexico

Operating Company: Percussion Petroleum, LLC.

County: Eddy

Magnetic Declination: 0.00

Country: United States

Proposed Azimuth: 180.06

Comment

North Reference: GRID

Latitude: 32.640563

Longitude: -104.461961

Tie-In Data

MD	Inclination	Azimuth	TVD	NS	EW
0.00	0.00	0.00	0.00	0.00	0.00

Survey Data

MD	Inclination	Azimuth	TVD	NS	EW	CA	CD	VS	DLS
134.00	1.40	123.90	133.99	-0.91	1.36	123.90	1.64	0.91	1.04
226.00	1.50	128.50	225.96	-2.29	3.23	125.30	3.96	2.29	0.17
317.00	1.50	152.20	316.93	-4.08	4.72	130.86	6.24	4.08	0.68
408.00	3.00	222.40	407.87	-6.90	3.67	151.97	7.81	6.89	3.15
500.00	5.00	231.80	499.64	-11.15	-1.10	185.65	11.21	11.16	2.28
593.00	7.30	244.20	592.10	-16.23	-9.61	210.62	18.86	16.24	2.84
685.00	9.10	253.90	683.16	-20.80	-21.86	226.43	30.17	20.82	2.46
776.00	9.70	255.80	772.94	-24.67	-36.21	235.73	43.82	24.71	0.74
867.00	9.60	256.80	862.65	-28.29	-51.03	241.00	58.34	28.34	0.21
958.00	9.60	255.80	952.38	-31.88	-65.77	244.14	73.09	31.95	0.18
1050.00	9.70	255.80	1043.08	-35.66	-80.72	246.16	88.25	35.75	0.11
1141.00	9.60	255.20	1132.79	-39.48	-95.49	247.54	103.33	39.58	0.16
1168.00	9.70	255.80	1159.41	-40.61	-99.87	247.87	107.82	40.72	0.53
1256.00	9.50	257.20	1246.17	-44.04	-114.14	248.90	122.34	44.16	0.35
1349.00	9.00	257.80	1337.97	-47.28	-128.74	249.83	137.14	47.41	0.55
1442.00	8.80	257.60	1429.85	-50.34	-142.79	250.58	151.41	50.49	0.22

MD	Inclination	Azimuth	TVD	NS	EW	CA	CD	VS	DLS
1536.00	8.50	251.00	1522.78	-54.15	-156.39	250.90	165.49	54.31	1.10
1630.00	8.10	248.00	1615.79	-58.89	-169.09	250.80	179.06	59.07	0.63
1723.00	7.70	247.00	1707.91	-63.78	-180.90	250.58	191.82	63.97	0.45
1817.00	7.50	245.70	1801.09	-68.77	-192.29	250.32	204.22	68.97	0.28
1911.00	7.50	242.90	1894.28	-74.09	-203.34	249.98	216.42	74.30	0.39
2005.00	7.50	242.20	1987.48	-79.74	-214.23	249.58	228.59	79.97	0.10
2099.00	7.40	242.00	2080.68	-85.44	-225.00	249.21	240.68	85.68	0.11
2193.00	10.20	220.30	2173.59	-94.64	-235.74	248.13	254.02	94.89	4.57
2239.00	15.70	206.50	2218.42	-103.32	-241.15	246.81	262.36	103.58	13.64
2286.00	17.20	202.00	2263.49	-115.46	-246.59	244.91	272.29	115.72	4.19
2332.00	20.40	200.80	2307.03	-129.26	-251.99	242.84	283.21	129.53	7.01
2379.00	24.20	199.40	2350.51	-146.01	-258.10	240.50	296.54	146.28	8.16
2425.00	28.50	199.40	2391.72	-165.27	-264.88	238.04	312.21	165.54	9.35
2472.00	33.10	198.90	2432.08	-188.00	-272.77	235.42	331.28	188.28	9.80
2518.00	37.40	196.30	2469.64	-213.30	-280.76	232.78	352.60	213.60	9.90
2565.00	41.60	191.70	2505.91	-242.30	-287.94	229.92	376.32	242.60	10.89
2612.00	45.50	188.90	2539.97	-274.15	-293.70	226.97	401.77	274.46	9.26
2659.00	50.00	186.60	2571.56	-308.61	-298.36	224.03	429.26	308.93	10.24
2705.00	54.80	182.50	2599.63	-344.92	-301.21	221.13	457.93	345.24	12.60
2752.00	58.80	180.10	2625.36	-384.23	-302.08	218.17	488.76	384.55	9.52
2799.00	62.80	178.80	2648.29	-425.24	-301.68	215.35	521.39	425.56	8.85
2846.00	67.20	178.10	2668.15	-467.81	-300.52	212.72	556.03	468.13	9.46
2893.00	71.70	178.60	2684.64	-511.79	-299.26	210.32	592.87	512.11	9.63
2940.00	76.20	179.70	2697.63	-556.95	-298.59	208.20	631.94	557.26	9.83
2987.00	78.20	179.70	2708.04	-602.77	-298.35	206.33	672.57	603.09	4.26
3034.00	81.50	179.70	2716.33	-649.03	-298.11	204.67	714.22	649.34	7.02
3080.00	84.30	179.50	2722.01	-694.67	-297.79	203.20	755.81	694.98	6.10
3127.00	84.70	179.40	2726.52	-741.45	-297.34	201.85	798.85	741.77	0.88
3219.00	89.30	180.20	2731.33	-833.30	-297.02	199.62	844.66	833.61	5.07
3312.00	91.40	180.00	2730.76	-926.30	-297.19	197.79	922.80	926.61	2.27
3405.00	89.00	179.90	2730.44	-1019.29	-297.10	196.25	1061.71	1019.60	2.58
3499.00	89.00	179.60	2732.08	-1113.27	-296.69	194.92	1152.13	1113.58	0.32
3593.00	89.00	179.30	2733.72	-1207.25	-295.79	193.77	1242.96	1207.56	0.32
3686.00	89.50	179.10	2734.93	-1300.24	-294.49	192.76	1333.17	1300.54	0.58
3780.00	90.50	179.30	2734.93	-1394.23	-293.18	191.88	1424.72	1394.53	1.08
3873.00	88.30	179.20	2735.91	-1487.21	-291.96	191.11	1515.60	1487.51	2.37
3966.00	89.10	179.10	2738.02	-1580.17	-290.59	190.42	1606.67	1580.48	0.87

MD	Inclination	Azimuth	TVD	NS	EW	CA	CD	VS	DLS
4059.00	89.80	179.10	2738.91	-1673.16	-289.12	189.80	1697.95	1673.46	0.75
4152.00	90.10	178.70	2738.99	-1766.14	-287.34	189.24	1789.36	1766.44	0.54
4244.00	90.50	179.70	2738.51	-1858.13	-286.05	188.75	1880.02	1858.43	1.17
4335.00	91.00	180.00	2737.32	-1949.12	-285.82	188.34	1969.96	1949.42	0.64
4427.00	91.60	179.70	2735.23	-2041.09	-285.58	187.96	2060.98	2041.39	0.73
4519.00	89.30	180.50	2734.51	-2133.08	-285.74	187.63	2152.14	2133.38	2.65
4610.00	89.30	180.70	2735.62	-2224.07	-286.69	187.35	2242.47	2224.37	0.22
4702.00	89.50	180.90	2736.58	-2316.06	-287.97	187.09	2333.89	2316.36	0.31
4794.00	91.30	181.20	2735.94	-2408.04	-289.66	186.86	2425.40	2408.34	1.98
4886.00	91.70	181.80	2733.53	-2499.97	-292.07	186.66	2516.98	2500.28	0.78
4978.00	91.70	181.90	2730.80	-2591.88	-295.04	186.49	2608.62	2592.19	0.11
5069.00	90.30	181.10	2729.22	-2682.84	-297.42	186.33	2699.27	2683.15	1.77
5160.00	90.90	181.20	2728.26	-2773.81	-299.24	186.16	2789.91	2774.12	0.67
5251.00	90.70	181.20	2726.99	-2864.78	-301.15	186.00	2880.57	2865.10	0.22
5309.00	90.80	180.90	2726.23	-2922.77	-302.21	185.90	2938.35	2923.08	0.55
5404.00	90.90	181.10	2724.82	-3017.74	-303.87	185.75	3033.00	3018.06	0.24
5498.00	90.00	180.20	2724.09	-3111.73	-304.94	185.60	3126.64	3112.05	1.35
5589.00	90.20	179.80	2723.93	-3202.73	-304.94	185.44	3217.22	3203.05	0.49
5681.00	90.20	180.00	2723.61	-3294.73	-304.78	185.29	3308.80	3295.05	0.22
5773.00	89.60	179.70	2723.77	-3386.73	-304.53	185.14	3400.40	3387.05	0.73
5864.00	90.20	180.10	2723.93	-3477.73	-304.38	185.00	3491.02	3478.05	0.79
5956.00	89.40	179.70	2724.25	-3569.73	-304.22	184.87	3582.67	3570.05	0.97
6048.00	89.90	179.90	2724.81	-3661.73	-303.89	184.74	3674.31	3662.04	0.59
6140.00	89.00	179.50	2725.69	-3753.72	-303.41	184.62	3765.96	3754.04	1.07
6231.00	89.10	179.80	2727.20	-3844.71	-302.86	184.50	3856.61	3845.02	0.35
6323.00	89.70	180.10	2728.16	-3936.70	-302.78	184.40	3948.33	3937.01	0.73
6414.00	88.90	179.90	2729.28	-4027.69	-302.78	184.30	4039.06	4028.01	0.91
6505.00	89.60	180.10	2730.47	-4118.68	-302.78	184.20	4129.80	4119.00	0.80
6597.00	89.00	179.50	2731.59	-4210.68	-302.46	184.11	4221.52	4210.99	0.92
6690.00	89.40	179.30	2732.89	-4303.66	-301.48	184.01	4314.21	4303.97	0.48
6784.00	90.10	179.30	2733.30	-4397.65	-300.33	183.91	4407.90	4397.96	0.74
6877.00	89.50	179.10	2733.62	-4490.64	-299.03	183.81	4500.59	4490.95	0.68
6972.00	88.10	178.70	2735.61	-4585.60	-297.21	183.71	4595.22	4585.91	1.53
7065.00	88.50	178.60	2738.37	-4678.53	-295.02	183.61	4687.83	4678.84	0.44
7159.00	89.00	178.60	2740.42	-4772.48	-292.73	183.51	4781.45	4772.79	0.53
7252.00	89.60	178.70	2741.56	-4865.45	-290.53	183.42	4874.12	4865.75	0.65
7345.00	89.90	178.60	2741.97	-4958.42	-288.34	183.33	4966.80	4958.72	0.34

MD	Inclination	Azimuth	TVD	NS	EW	CA	CD	VS	DLS
7438.00	90.50	178.80	2741.64	-5051.40	-286.23	183.24	5059.50	5051.70	0.68
7531.00	89.10	178.30	2741.97	-5144.37	-283.88	183.16	5152.19	5144.66	1.60
7625.00	89.60	178.30	2743.03	-5238.32	-281.09	183.07	5245.85	5238.61	0.53
7719.00	90.20	178.60	2743.20	-5332.28	-278.55	182.99	5339.55	5332.57	0.71
7813.00	89.50	179.20	2743.44	-5426.26	-276.74	182.92	5433.32	5426.55	0.98
7907.00	89.60	180.00	2744.18	-5520.26	-276.09	182.86	5527.16	5520.54	0.86
8001.00	90.10	179.80	2744.43	-5614.26	-275.92	182.81	5621.03	5614.54	0.57

Projected Survey

MD	Inclination	Azimuth	TVD	NS	EW	CA	CD	VS	DLS
8075.00	90.10	179.80	2744.30	-5688.26	-275.67	182.77	5694.93	5688.54	0.00